

S/081/61/000/020/059/089
B102/B147

AUTHORS: Tolstaya, M. A., Bogatyreva, S. V., Gradusov, G. N.

TITLE: Removal of corrosion products from steels after testing in water at high temperatures

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 20, 1961, 263, abstract 20I190 (Sb. "Korroziya reaktorn. materialov". M., Atomizdat, 1960, 20 - 28)

TEXT: In order to remove corrosion products formed under the action of water at high temperatures it is recommended that the method of cathodic treatment should be used for austenitic stainless steel specimens at different temperatures and at $D_c = 0.1 - 0.2 \text{ a/cm}^2$ until constant weight is reached in 2.5 - 5.0% H_2SO_4 solution with Urotropin as a corrosion inhibitor. Treatment in 8% NaOH solution at 70°C and at $D_c = 0.05 - 0.1 \text{ a/cm}^2$ is recommended for carbon steels. It is noted that control specimens should be treated under optimum conditions. [Abstracter's note: Complete Card 1/2]

Removal of corrosion products...
translation.]

S/081/61/000/020/059/089
B102/B147



Card 2/2

18.8300

29039

S/081/61/000/018/015/027
B103/B101

AUTHORS: Tolstaya, M. A., Gradusov, G. N., Bogatyreva, S. V.

TITLE: Effect of electropolishing on the corrosion resistance of 1X18H9T steel and carbon steel 20 in water at high temperatures

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 18, 1961, 271, abstract 18I165 (Sb. "Korroziya reaktorn. materialov" M., Atomizdat, 1960, 167 - 184)

TEXT: Corrosion tests of 1X18H9T (1Kh18N9T) steel, steel with 5% Cr and 2% Mo content, and Cr.20 (St.20) carbon steel were conducted to study the effect of surface treatment on kinetics and rate of corrosion (RC) of the steels in highly pure (HP) water at high parameters (310°C and 100 atm) during 100-1500 hr. The effects of electropolishing, cathodic pickling, and mechanical polishing were studied. It is pointed out that alloying of steel with Cr in amounts of <12% is not capable of making corrosion-resistant steels that remain serviceable under the action of HP H₂O. It

Card 1/2

X

Effect of electropolishing...

29039
S/081/61/000/C18/C15/C27
B103/B101

was found that the principal inhibitory effect on RC of steels in HP water at high parameters did not originate in the oxide layer removable by cleaning but in the subjacent fine oxide film inseparable from the metal surface. [Abstracter's note: Complete translation.]

X

Card 2/2

TOLSTAYA, M.A.; BOGATYREVA, S.V.; GRADUSOV, G.N.

Corrosion resistance of zirconium steel and alloys in boric acid
solutions at different temperatures. Atom. energ. 10 no.3:222-226
Mr '61. (MIRA 14:3)

(Zirconium) (Steel-~~Corrosion~~) (Boric acid)
(Nuclear reactors-~~Materials~~)

18.8310

28569

S/137/61/000/009/077/087
A060/A101

AUTHORS: Tolstaya, M. A., Gradusov, G. N., Bogatyreva, S. V.

TITLE: Effect of electric polishing upon the corrosion resistance of steel 1X18H9T (1Kh18N9T) and carbon steel 20 in water at high temperatures

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 9, 1961, 54, abstract 9I368 (V sb. "Korroziya reaktorn. materialov", Moscow, Atomizdat, 1960, 167-184)

TEXT: Corrosion tests were carried out on stainless steel 1Kh18N9T steel containing 5% Cr and 2% Mo, and carbon steel 20 in water of high purity and high-grade parameters. The tests were carried out in autoclaves at 310°C and 100 atm for various time durations (from 100 to 1,500 hours). Mechanical and, in particular, electrolytic polishing reduce the corrosion rate of the enumerated grades of steel. Cleansing of carbon steel 20 by the method of cathodic scouring before testing raises its corrosion resistance. Alloying of steel with chromium up to < 12% does not lead to the creation of corrosion resistant steels. The periodic removal of the corrosion products from the steel by the method of cathodic scouring causes practically no change in the total corrosion rate.

X

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Effect of electric polishing upon ...

28569

S/137/61/000/009/077/087
A060/A101

The main inhibiting action upon the rate of steel corrosion in high-purity water with high-grade parameters is exerted not by the layer of oxides separated in the course of cleansing, but by a thin oxide film, located just under the former, inseparable from the metal surface. There are 9 references.

Ye. Layner

[Abstracter's note: Complete translation]

Card 2/2

18-8300

28570

S/137/61/000/009/083/087
A060/A101

AUTHORS: Tolstaya, M. A., Gradusov, G. N., Bogatyreva, S. V.

TITLE: Investigation of the corrosion mechanism in zirconium alloys alloyed with niobium in high-purity water

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 9, 1961, 55, abstract 9I374 (V sb. "Korroziya reaktorn. materialov". Moscow, Atomizdat, 1960, 250-263)

TEXT: The corrosion mechanism was investigated in Zr-alloys containing 1 and 2.5% Nb in water of high purity at a temperature of 90°C saturated with various gases (O, N, air, and H). The corrosion of the Zr-Nb alloy under these conditions is arrested by the passivation of the metal and by the formation of a strong protective film. The effectiveness of the cathodic process is mainly determined by the rate of O ionization, and not by the intensity of its diffusion in the metal. The corrosion rate of Zr alloys depends little upon the quantity of O in the water. The determining factor of inhibition in this process remains the passivation of the metal. The presence of H in the water affects the corrosion of Zr alloys little. The presence of contacts between the Zr alloy

Card 1/2

Investigation of the corrosion mechanism ...

285703/137/61/000/009/083/087
A060/A101

and steel 1X1849T (1Kh18N9T) in water of high purity presents no danger. Defects in the metal surface, the presence in the water of compounds forming complexes with Zr, activate the Zr and raise the corrosion rate. There are 9 references.

Ye. Layner

[Abstracter's note: Complete translation]

Card 2/2

188300

28313

S/081/61/000/C16/C21/040
B106/B101

AUTHORS: Tolstaya, M. A., Gradusov, G. N., Bogatyreva, S. V.

TITLE: Study of the corrosion resistance of zirconium-alloy tubes in water at high temperatures

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 16, 1961, 305-306, abstract 161167 (Sb. "Korroziya reaktorn. materialov". M., Atomizdat, 1960, 264-274)

TEXT: It was found that the corrosion rate of Zr alloyed with Nb, in water at 263-310°C and at pressures of 50-100 atm is 0.0016-0.0020 g/m²·hr or 0.0021-0.0027 mm per year. It is pointed out that a rough surface treatment of the alloy accelerates the detachment of the protective skin and favors the corrosion. The occurrence of fluorine ions on the metal surface after its etching increases the corrosion rate of zirconium and its alloys. [Abstracter's note: Complete translation.]

Card 1/1

TOLSTAYA, M A

36

PHASE I BOOK EXPLOITATION

SOV/5256

Gerasimov, Valentin Vladimirovich, ed., Candidate of Chemical Sciences.

Korroziya reaktornykh materialov; sbornik statey (Corrosion of Nuclear-Reactor Materials; a Collection of Articles) Moscow, Atomizdat, 1960. 284 p. 3,700 copies printed.

Ed.: A.I. Zavodchikova; Tech. Ed.: Ye.I. Mazel'.

PURPOSE: This collection of articles is intended for mechanical and metallurgical engineers as well as for scientific research workers concerned with the construction of nuclear reactors.

COVERAGE: The water corrosion of various types of stainless steel and alloys under high pressures and temperatures is investigated from the point of view of the use of these materials for the construction of nuclear reactors. Attention is given to the following: the use of oxygen for protecting steel against corrosion, the behavior of steel in high-temperature

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Corrosion of Nuclear- (Cont.)

SOV/5256

water with various compositions, factors of metal stress corrosion, intergranular corrosion, the mechanism of corrosion cracking, and the corrosion resistance of aluminum and zirconium alloys. Conclusions based on test results are included. No personalities are mentioned. Most of the articles are accompanied by references. Of 238 references 97 are Soviet.

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~~Card 2/9~~

Corrosion of Nuclear-(Cont.)

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AVAILABLE: Library of Congress (TA462.G4)

Card 9/9

VK/wrc/bc
10-12-61

20172

18.8310 1138, 1454, 1573

S/089/61/010/003/002/021
B108/B209

AUTHORS: Tolstaya, M. A., Bogatyreva, S. V., Gradusov, G. N.

TITLE: Resistance of steels and zirconium alloys to corrosion in solutions of boric acid at different temperatures

PERIODICAL: Atomnaya energiya, v. 10, no. 3, 1961, 222-226

TEXT: For an emergency stop of water-cooled water-moderated reactors, boric acid solution with a boron concentration of about 1 g/l may be introduced into the water of the first circuit. Such a system is, for instance, installed in the "Yankee" nuclear power station. It was the aim of the present work to examine the influence of boric acid solutions upon the corrosion resistance of the structural materials of the first circuit in a water-cooled water-moderated reactor. The specimens were parts of tubes and plates of 1X18M9T (1Kh18N9T)-type steel, steel 20, and zirconium alloys containing 1 and 2.5% niobium. The surface of the specimens was subjected to electropolishing, mechanical polishing, and etching. These experiments were carried out under static conditions in

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Resistance of steels and zirconium ...

an autoclave of stainless 1Kh18N9T steel at pressures between 100 and 140 atm and at saturation temperature. In other experiments made at 40°C and atmospheric pressure, specimens were studied simultaneously in boric acid solution and highly pure water. The specimens were plates of steel of the types 1Kh18N9T, OX13 (OKh13), x5M2 (Kh5M2), and 20, as well as of zirconium with 2.5% niobium. The solutions were analyzed for their boron content by colorimetric photometry with carmine red as indicator. Moreover, the penetration of boron into the metals was studied spectrographically, by removing 0.05-0.1 mm thick shavings from the surface which had been carefully rinsed. The rate of corrosion was determined by weighing the specimens with an accuracy of 0.1 mg. The steel specimens showed a decrease in weight after the corrosion products had been removed; the corrosion rate of the zirconium alloys was determined from the excess weight of the specimens. Table 1 shows the rates of corrosion in boric acid solutions with a pH of 5.8-5.5 at 335°C and 140 atm. In solutions of higher H_3BO_3 concentration (5.65 g/l) with a pH of 5.2, a temperature of 310°C and a pressure of 100 atm, an investigation for 150 hrs gave the following results: The rate of corrosion of

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S/089/61/010/003/002/021
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Resistance of steels and zirconium ...

1Kh18N9T steel was nearly the same as that shown in Table 2 when converted to 1000 hrs. At 40°C, carbon steel 20 was considerably affected by pure water and by the acid, thus forming crumbly corrosion products. Kh5M2-type steel corroded more slowly than carbon steel. The corrosion of OKh13-type ferrite steel was insignificant in both media. Spectrographic analysis showed that boron did not penetrate into the steel. Zirconium alloys, however, adsorb boron from high-parameter boric acid solutions, so that the boron content exceeds the admissible concentration in the alloy by 2-3 orders of magnitude. Boron obviously takes root in the ZrO₂ surface layer of zirconium alloys during corrosion in high-parameter solutions. The results show that boric acid solutions may be used for "soft" reactor control. An emergency injection of boric acid must not damage the materials of the first circuit. Boric acid does not decompose in pure water. OKh13-type ferrite steel is recommended for the construction of storing tanks. There are 4 tables and 4 references: 3 Soviet-bloc.

SUBMITTED: June 6, 1960

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S/089/61/010/003/002/021
B108/B209

Resistance of steels and zirconium ...

Legend to Table 1: Corrosion

rate, $\text{g/m}^2 \cdot \text{hr}$. 1) 1Kh18N9T-type steel; 2) zirconium alloy with 2.5% niobium; 3) zirconium alloy with 1% niobium; 4) steel 20. A) Highly pure water; B) pure water + 0.23 g/l H_3BO_3 ; C) pure water + 1.13 g/l H_3BO_3 . a) No treatment; b) mechanically polished; c) electropolished; d) polished and etched (with 5% concentrated HF, 45% concentrated HNO_3 , 50% water).

вода высокой чистоты A)	вода высокой чистоты с добавкой 0,23 г/л H_3BO_3 B)	вода высокой чистоты с добавкой 1,13 г/л H_3BO_3 C)
0,0005 a) 0,0003 b) 1) 0,0001 c)	0,0007 0,0009 0,0002	0,0007 0,0008 0,0006
0,0011 a) 2) 0,0013 b)	0,0011 0,0012	0,0015 0,0016
0,0008 a) 3) 0,0015 b)	0,0010 0,0014	0,0009 0,0011
0,0040 a) 4) 0,0019 c) - b)	0,0037 0,0019 0,0035 Table 1	0,0041 0,0021 0,0038

Card 4/4

18.8300

S/096/60/000/010/020/022

E194/E135

AUTHORS: Tolstaya, M.A., Gradusov, G.N., and Bogatyreva, S.V.

TITLE: The Corrosion Resistance of Zirconium Alloys¹ in Water
at High Temperatures

PERIODICAL: Teploenergetika, 1960, No 10, p 95

TEXT: Tubular specimens were tested at temperatures of 263 °C (50 atm) and 310 °C (100 atm) in pure water and in water containing chlorine ions (10 mg/litre) for 2300 hours. It was established that the corrosion rate was greatly influenced by the quality of the surface treatment of the specimen and by contact with teflon linings. The other factors investigated did not affect the rate of corrosion.

ASSOCIATION: Moskovskiy energeticheskiy institut
(Moscow Power Institute)

Card 1/1

S/020/62/142/002/027/029
B101/B144

AUTHORS: Taubman, A. B., Tolstaya, S. N., Borodina, V. N., and Mikhaylova, S. S.

TITLE: Adsorptive modification of fillers and pigments and structure formation in polymer solutions

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 142, no. 2, 1962, 407-410

TEXT: The change in hydrophilic properties of mineral fillers due to oriented adsorption of surfactants was investigated. The experiments were conducted: (A) with 0.5% toluene solution of CKC-30 (SKS-30) rubber, filled with kaolin; (B) with 1.2% toluene solution of perchloro vinyl resin (PCVR), filled with TiO_2 (polymer-to-filler ratio = 1:80); (C) with 1.2% of dichloro ethane solution of PCVR, filled with TiO_2 (ratio 1:40). The change in static shear stress P_m was measured with a Veyler-Rebinder apparatus with addition of a surfactant (octadecyl amine (I) or stearic acid (II)), and the tensile strength of SKS-30 rubber samples, filled with activated kaolin (90 parts by weight of kaolin per 100 parts by weight of rubber) and vulcanized for 60 min at $140^\circ C$ and 27 kg/cm^2 . For the ultraviolet-irradi-

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Adsorptive modification of ...

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ated PCVR samples, "chalking" owing to the decomposition of the film and to the emergence of TiO_2 to the surface was measured photometrically by S. V. Yakubovich and V. A. Zubchuk, using a method of GIPI-4. The degree of adsorption of the surfactant by the filler was determined by photometric measurement of the methylene blue adsorption on the surface not occupied by surfactants. A maximum was found for $P_m = f(C_{\text{surfactant}})$ in all the experiments. For SKS-30 rubber filled with kaolin and activated with 2% I, P_m increased from 170 to 670 dynes/cm², while it dropped at a higher concentration of I. The maximum of tensile strength P_t lay at the same surfactant concentration which corresponds to the P_m maximum. A similar effect of I was observed with PCVR (P_m increased from 150 to 330 dynes/cm²), however, the optimum concentration of I was 0.2%. The "critical range" of occupation of the filler surface by an adsorbed surfactant, within which structuralization occurs, was very narrow. In the case of kaolin, the occupation was about 50%. In addition, the filler particles must be modified by irreversible chemisorption. II, which is reversibly adsorbed by kaolin, showed no structuralizing effect with rubber. When I and II were added simultaneously, the P_m in the maximum dropped from 670 to 280 dynes/cm², its position remaining unchanged at 2% I. For amphoteric Card 2/3

Adsorptive modification of ...

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B101/B144

TiO₂, II was also effective. The optimum lay here at 0.080% II (350 dynes/cm²). The experimental series C showed the specific effect of the solvent. In dichloro ethane, a minimum of P_m occurred at 0.2%I. The intensity of chalking was lowest at the P_m optimum where the linkage between pigment and polymer is highest. There are 2 figures and 9 references: 8 Soviet and 1 non-Soviet. The reference to the English-language publication reads as follows: P. Reh binder, Discuss. Farad. Soc., 18, 151 (1954).

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry of the Academy of Sciences USSR)

PRESENTED: August 15, 1961, by P. A. Rebinder, Academician

SUBMITTED: August 15, 1961

Card 3/3

SHOLOKHOVA, A.B.; TOLSTAYA, S.N.; FREYDIN, A.S.

Effect of the adsorption modification of fillers on the strength
properties of polymeric compositions. Plast. massy no.5:
72-74 '65. (MIRA 18:6)

TAUEMAN, A.B.; TOLSTAYA, S.N.; BORODINA, V.N.; MIKHAYLOVA, S.S.

Adsorption modification of fillers and pigments, and structure
formation in polymer solutions. Dokl. AN SSSR 142 no.2:407-
410 Ja '62. (MIRA 15:2)

1. Institut fizicheskoy khimii AN SSSR. Predstavleno akademikom
P.A.Rebinderom.
(Polymers)

PUZYREV, S.A.; TOLSTAYA, S.N.

Silicon organic compounds used in paper and cardboard production.

Bum. prom. 33 no.9:8-10 S '58.

(MIRA 11:10)

1. TSentral'nyy nauchno-issledovatel'skiy institut tsellyuloznoy
i bumazhnoy promyshlennosti.

(Silicon organic compounds) (Paper) (Paperboard)

TOLSTAYA, S.N.; BORODINA, V.N.; TAUBMAN, A.B.

Adsorption activation and the reinforcing action of mineral fillers in polymer systems. Koll.zhur. 27 no.3:446-452 My-Je '65. (MIRA 18:12)

1. Institut fizicheskoy khimii AN SSSR, Moskva. Submitted Sept. 12, 1963.

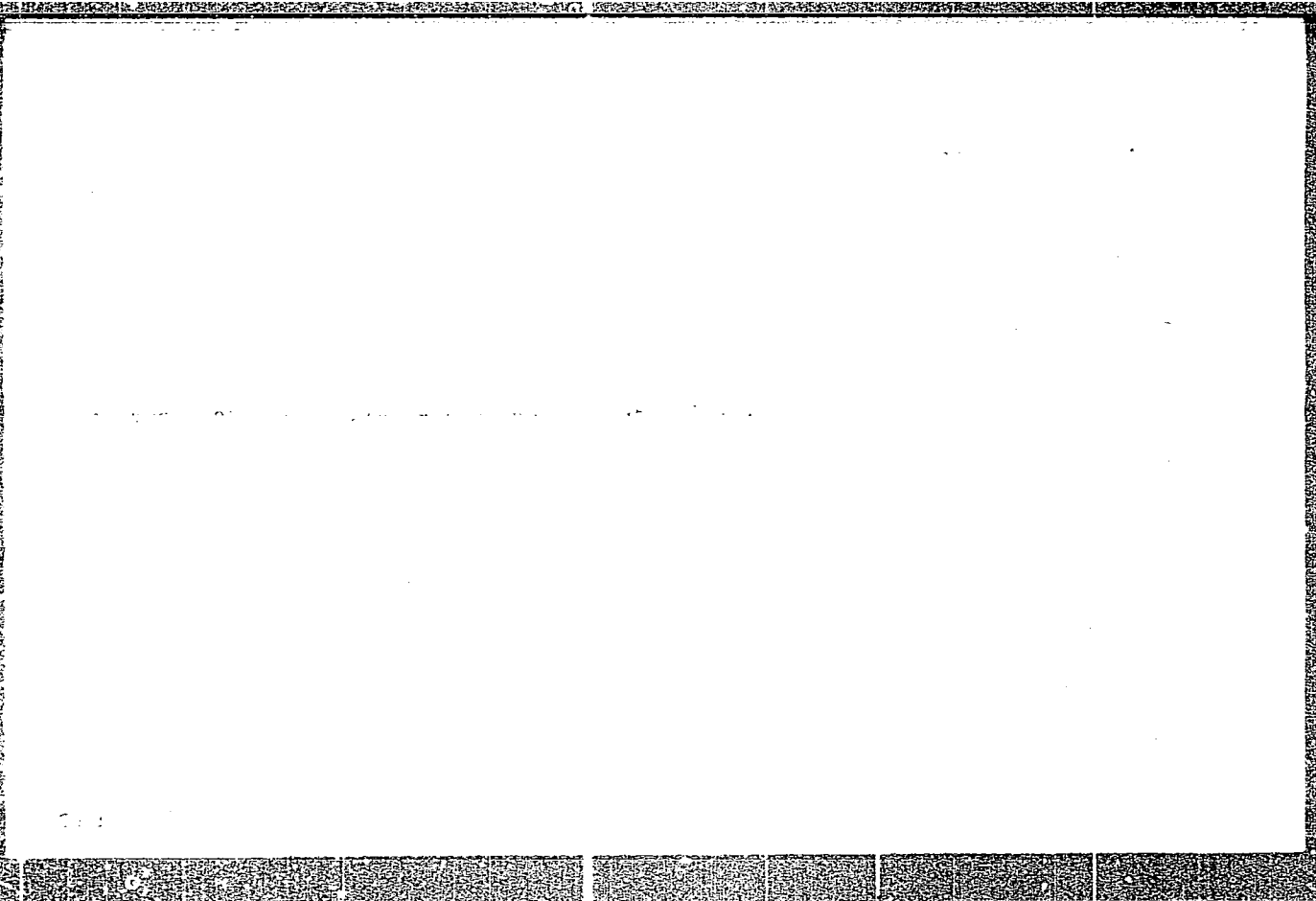
NESMEYANOV, A.N.; TOISTAYA, T.P.; ISAYEVA, L.S.

Phenyl-2-thienyl bromonium salts. Izv. AN SSSR. Ser. Khim.
no.1:166-168 '66. (MIRA 19:1)

1. Institut elementoorganicheskikh soedineniy AN SSSR i
Moskovskiy gosudarstvennyy universitet. Submitted May 17,
1965.

"APPROVED FOR RELEASE: 07/16/2001

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A. INFORMATION - SECRETARY OF DEFENSE, DEPARTMENT OF DEFENSE, DEPARTMENT OF DEFENSE

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TITLE: The adsorption of organic vapors on activated carbon

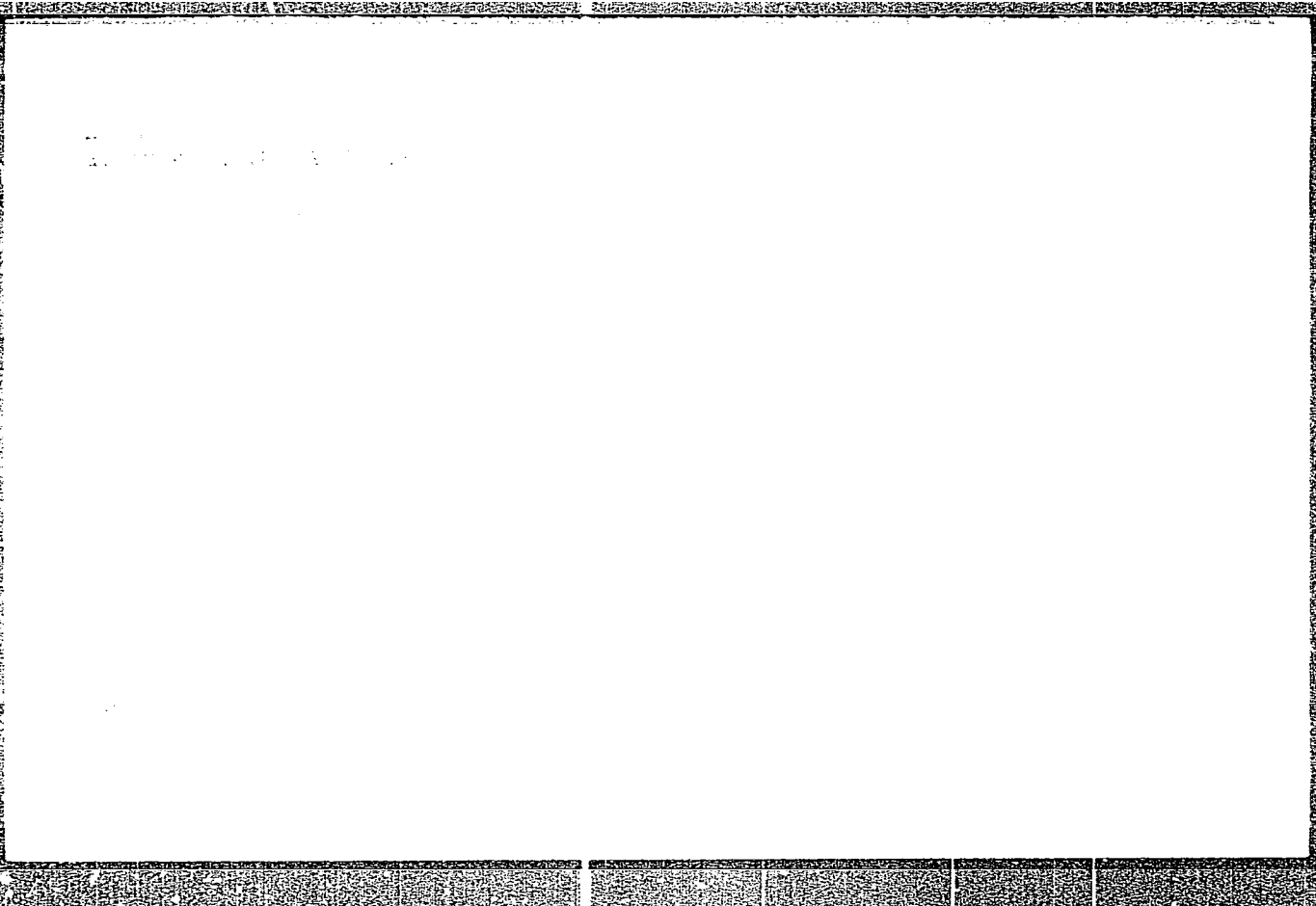
SOURCE: Kauchuk i resina, no. 1, 1965 15-18

1. The adsorption of organic vapors on activated carbon is a process of great importance in the chemical industry. It is used for the purification of gases and liquids, for the separation of mixtures, and for the storage of gases and liquids.

ABSTRACT: The adsorption of organic vapors on activated carbon is a process of great importance in the chemical industry. It is used for the purification of gases and liquids, for the separation of mixtures, and for the storage of gases and liquids.

"APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001756120005-4



APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001756120005-4"

AUTHORS: Nesmeyanov, A. N., Member, Academy of Sciences, USSR, Tolstaya, T. P., Isayeva, L. S. SOV/20-122-4-21/57

TITLE: The Synthesis of Aromatic Organometallic Compounds of Bismuth Via Diazocompounds (Sintez aromaticeskikh metalloorganicheskikh soyedineniy vismuta cherez diazsoyedineniya)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 4, pp 614 - 617 (USSR)

ABSTRACT: The synthesis of organometallic compounds by the decomposition of diazonium salts by means of metal powders (suggested by the first author, Ref 1) has hitherto been realized for the production of these compounds by means of the following metals Hg (Ref 1), Tl (Ref 2), Sn (Ref 3), Pb (Ref 4), Sb (Ref 5), and Bi (Refs 6 - 9). The authors investigated systematically the decomposition of the diarylbromonium borfluorides by metal powder and found that the results of these reactions are to a great extent similar to the results of corresponding reactions with aryl diazonium borfluorides. This experience was used in the case of the decomposition of the aryl diazonium salts as well, and the analogy was

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The Synthesis of Aromatic Organometallic Compounds
of Bismuth Via Diazocompounds

SOV/20-122-4-21/57

confirmed. The decomposition of aryl diazonium borfluorides in acetone by the powder of metallic bismuth led to good yields of the tri-aryl-bismuth (30-50-70%) for various aromatic radicals. Thus were produced: triphenyl-bismuth, tri-p-tolyl-bismuth, tri-o-tolyl-bismuth, tri-p-chlorophenyl-bismuth, tri-m-tolyl-bismuth-dichloride, tri-p-bromphenyl-bismuth, tri-p-chlorphenyl-bismuth-dichloride, tri-p-carb-ethoxy-phenyl-bismuth-dichloride, tri-p-ethoxy-phenyl-bismuth, tri-m-nitro-phenyl-bismuth-dichloride, and tri-p-nitrophenyl-bismuth-dichloride. This synthesis process of the bismuth organic compounds via diazocompounds is supposed to be the best at present. Reference 13 gives a probable explanation of the reaction mechanism. There are 19 references, 11 of which are Soviet.

ASSOCIATION:

Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elementary Organic Compounds, AS USSR)
Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov)

Card 2/3

The Synthesis of Aromatic Organometallic Compounds
of Bismuth Via Diazocompounds

SOV/20-122-4-21/57

SUBMITTED: June 30, 1958

Card 3/3

5 (2,3)

AUTHORS:

Nesmeyanov, A. N., Academician,
Tolstaya, T. P.

SOV/20-128-4-25/65

TITLE:

Formation of a Diphenylbromonium Salt on the Decomposition
of $C_6H_5N_2HgBr_3$

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 4, pp 726 - 727
(USSR)

ABSTRACT:

Depending on conditions, Nesmeyanov found (Refs 1,2) 2 principal directions of decomposition of double salts of phenyldiazonium iodide and mercuric iodide. One of them is the automatic decomposition producing the last-mentioned double salt in a 10% yield. In the experiments then made on the automatic decomposition of double salts of other halides and the corresponding mercuric halide, no separation was possible so that this method - now found to be real - could not be used at that time. But now the authors indicate that the automatic decomposition of $C_6H_5N_2HgBr_3$ proceeds in a way similar to that of the corresponding iodine compound. It causes the formation of a double salt of diphenylbromonium bromide and mercuric bromide (see Diagram). The latter reaction probably proceeds via bromo-

Card 1/2

Formation of a Diphenylbromonium Salt on the
Decomposition of $C_6H_5N_2HgBr_3$

307/20-126-4-25/65

benzene as an intermediate which is subsequently phenylated at the expense of a heterolysis of a new portion of $C_6H_5N_2HgBr_3$.

This explains the small yield (2.5%) of diphenylbromonium salt. Hence, it appears that a former explanation by Nesmeyanov (Ref 1) should be replaced by a new one: the primary decomposition product - iodobenzene - is phenylated due to the heterolytic decomposition of $C_6H_5N_2HgJ_3$. The double salt of diphenylbromonium

bromide and mercuric bromide was obtained from the diazonium double salt by addition of mercuric-bromide solution in hydrobromic acid to a phenyldiazonium-bromide solution until complete precipitation. 95 g of the double salt produced were subjected to decomposition at room temperature for several months. The 3rd reaction product - mercuric bromide - was obtained in a 74% yield. There are 4 references, 3 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov)

SUBMITTED: July 2, 1959
Card 2/2

NESMEYANOV, A.N., akademik; TOLSTAYA, T.P.; GRIB, A.V.

Diphenyl-o,o'-diphenyleneammonium salts. Dokl. AN SSSR 153
no.3:608-611 N '63. (MIRA 17:1)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.

NESMEYANOV, A. N.; EPSHTEYN, L. M.; ISAYEVA, L. S.; TOISTAYA, T. P.;
KAZITSYNA, L. A.

Infrared spectra of diphenylhalo onium and triphenyl oxonium
salts in the region 400-750 cm^{-1} . Izv AN SSSR Ser Khim no. 4:
613-618 Ap '64. (MIRA 17:5)

1. Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova.

NESMEYANOV, A.N., akademik; ISAYEVA, L.S.; TOLSTAYA, T.P.

Dimethylphenylsulfoxonium salts. Dokl. AN SSSR 151 no.6:1339-1342
Ag '63. (MIRA 16:10)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova i
Institut elementoorganicheskikh soyedineniy AN SSSR.

NESMEYANOV, A.N., akademik; TOLSTAYA, T.P.; GRIB, A.V.

Tri-n-aminotriphenyloxonium cation as a structural analog of
parafuchsin. Dokl. AN SSSR 139 no.1:114-116 J1 '61. (MIRA 14:7)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.
(Oxonium compounds) (Parafuchsin)

NESMEYANOV, A.N., akademik; TOLSTAYA, T.P.; ISAYEVA, L.S.; GRIB, A.V.

Nitration of triphenyloxonium and diphenylhalogenonium
cations. Dokl.AN SSSR 133 no.3:602-605 J1 '60.

(MIRA 13:7)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.
(Oxonium compounds)
(Halogenonium compounds)

5(2)

AUTHORS:

Nesmeyanov, A. N., Academician,
Reutov, O. A., Corresponding Member
AS USSR. Tolstaya, T. P., Ptitsyna, O. A.,
Isayeva, L. S., Turchinskiy, M. F.,
Bochkareva, G. P.

SOV/20-125-6-25/61

TITLE:

Organometallic Compounds Prepared From Double Salts of Halogen
Metals and Halogenoniums (Metalloorganicheskiye soyedineniya
iz dvoynnykh soley galoidnykh metallov i galogenoniyev)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 6, pp 1265-1268
(USSR)

ABSTRACT:

The present paper adds two further types, (III) and (IV), to
the two rather similar reaction types (I) and (II) of the
synthesis of organometallic compounds. Hg, Tl, Sn, Pb, As, Sb,
and Bi may appear as metal $M^{(n)}$ in the method of diazonium
double salts (Ref 1); Cu, Zn, Fe, as well as $M^{(p)} = M^{(n)}$ as
metal $M^{(p)}$ for various combinations. In the method of iodonium
double salts (Ref 2) Hg, Sn, Sb, and Bi were investigated as
 $M^{(n)}$ which gave a good yield of corresponding organometallic

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Organometallic Compounds Prepared From Double Salts
of Halogen Metals and Halogenoniums

SOV/20-125-6-25/61

compounds. The same metal $M^{(n)}$ is usually used as $M^{(p)}$, sometimes, however, Zn or Cu. The corresponding decomposition reactions were carried out by the authors in an acetone solution. For this purpose the same metal powder was used as was chosen by O. A. Reutov and O. A. Ptitsyna for diphenyl iodonium salts. The course and the results of these new reactions were found to be completely similar to those of the last-mentioned salts. This is a new confirmation of a similarity of all diaryl halogenoniums. Phenyl mercury iodide with yields of 22 and 35% is produced by decomposition of the double salts of diphenyl chloronium iodide and of diphenyl bromonium iodide with HgJ_2 by powdered copper in acetone at low temperature. Diphenyl-tin-dichloride with yields of 57 and 55% is produced by decomposition of the double salts of diphenyl chloronium- and diphenyl bromonium with $SnCl_4$ by powdered tin. The decomposition of the corresponding double salts of antimony powder leads to a mixture of phenyl-dichlorostibine, diphenyl-chlorostibine, and a small quantity of organo-antimony triaryl compounds. Triphenyl bismuth is produced by decomposition of the bismuth-trichloride

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Organometallic Compounds Prepared From Double Salts
of Halogen Metals and Halogenoniums

SOV/20-125-6-25/61

double salts by bismuth powder. According to the analysis it is assumed that the double salts of antimony-trichloride and of bismuth-trichloride form mixtures of the compounds:

$[(C_6H_5)_2Hal^+]MeCl_4^-$ and $[(C_6H_5)_2Hal^+]_2MeCl_5^{--}$. Table 1 gives 21 decomposed salts, the decomposition temperature and calculated as well as actually obtained results of the analysis, table 2 shows the decomposition reactions of the aforesaid double salts with the halides of heavy metals. The double salts of triphenyl-oxonium either do not react at all with the metal powders under the given experimental conditions, or only with a change of the anion part of the double salt. The cation of triphenyl-oxonium is not changed and does not form organometallic compounds. Thus this method is restricted by the inapplicability of oxonium- and (as is expected by analogy) of ammonium salts. The authors finally try to explain this behavior of triphenyl-oxonium salts. There are 2 tables and 11 references, 5 of which are Soviet.

ASSOCIATION:
Card 3/4

Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov) Institut

Organometallic Compounds Prepared From Double Salts
of Halogen Metals and Halogenoniums

SOV/20-125-6-25/61

elementoorganicheskikh soedineniy Akademii nauk SSSR (Institute
of Elemental-Organic Compounds of the Academy of Sciences USSR)

SUBMITTED: January 7, 1959

Card 4/4

5(3)

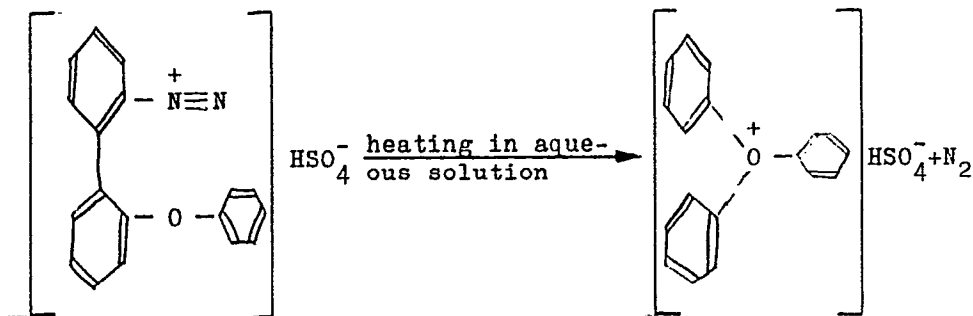
SOV/62-59-4-12/42

AUTHORS: Nesmeyanov, A. N., Tolstaya, T. P.

TITLE: Salts of o,o'-Diphenylene Phenyl Oxonium (Sol'i o,o'-difenilen-feniloksoniya)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 4, pp 647-651 (USSR)

ABSTRACT: In the present work the o,o'-diphenylene phenyl oxonium sulphate has been synthesized for the first time, by heating the aqueous solution of o-phenoxy-o'-phenoxy-diazonium sulphate:



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Salts of o,o'-Diphenylene Phenyl Oxonium

SOV/62-59-4-12/42

By an exchange reaction a number of salts of this cation have been obtained: picrate, rhodanide, trichromate, borofluoride, tetraphenyl borate, chloroplatinate, ferric cyanide, ferrous cyanide, nitroprusside, permanganate and iodide. All oxonium salts are difficultly soluble in water. They have been obtained by an addition of aqueous inorganic salt solutions to the above-mentioned oxonium sulphate solution. The thermal decomposition of o,o'-diphenylene phenyl oxonium iodide causes a breaking of the cycle and the formation of o-phenoxy-o'-iodide diphenyl. This is considered a proof of the structure of the salts described. There are 1 figure and 9 references, 4 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov)

SUBMITTED: July 16, 1957

Card 2/2

5(2,3)

AUTHORS:

Nesmeyanov, A. N., Academician,
Tolstaya, T. P., Isayeva, L. S.

SOV/20-125-2-25/64

TITLE:

Reactions of the Salts of Diphenyl-bromonium, Diphenyl-chloronium, and Triphenyl-oxonium With Metals (Reaktsii so
difenilbromoniya, difenilkhloroniya i trifeniloksoniya s metami

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 2, pp 330-33.
(USSR)

ABSTRACT:

Aryl-diazonium- (Ref 1) and di-aryl-iodonium salts (Ref 2) react with metals to form organometallic compounds of the non-transitional metals. The paper under consideration is devoted to the reactions with metals of the salts discovered by the author and enumerated in the title (Refs 3-5). Acetone constitutes the best medium for the formation of organometallic compounds from aryl-diazo compounds. It was mainly employed in the experiments under consideration. Tables 1 and 2 show the results. The reactions with metals of the diphenyl-bromonium salts and of the similarly behaving diphenyl-chloronium salts resemble those of the diphenyl-iodonium- and phenyl-diazonium salts. In certain cases (dealt with in greater detail in the paper), they form organometallic com-

Card 1/4

Reactions of the Salts of Diphenyl-bromonium,
Diphenyl-chloronium, and Triphenyl-oxonium With Metals

SOV/20-125-2-25/64

pounds of the nontransitional metals, yields being satisfactory in many instances. The triphenyl-oxonium salts, however, could not be induced to effect this formation. There is a far-reaching analogy in the behaviour of the salts of all 3 diphenyl-halogenoniums on the one hand, and of the phenyl-diazonium salts on the other hand. For this reason, the authors returned to the interaction of the diazonium salts with bismuth. They were able to propose a preparative manufacturing procedure for triaryl-bismuth compounds by means of the diazo method (Ref 7), which is vastly superior to the methods described on earlier occasions (Ref 8). There was a significant discrepancy in the behaviour of the halogenides (usually iodides) of the diphenyl-halogenoniums on the one hand, and of their borofluorides on the other hand. The former reacted less frequently with metals to form organometallic compounds (Hg, Sn). Unlike the borofluorides, they did, however, form phenyl-mercury-halogenides with good yields. With nontransitional metals, said borofluorides formed organometallic compounds. With nobler metals (Pt, Ag, Hg), however, the reaction did not occur. The halogenides also reacted with Pt and Cu. In the former case, due to a purely catalytic

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Reactions of the Salts of Diphenyl-bromonium,
Diphenyl-chloronium, and Triphenyl-oxonium With Metals

SOV/20-125-2-25/64

reaction, a mixture of haloide benzenes was formed. The above-stated facts can best be illustrated by a simple, though by no means exhaustive, pattern (given in this connection, (reaction groups I and II, Ref 9). The hypothesis behind the pattern takes for basis the homolytic disruption of the bond of the covalent form of the onium compound, which leads to the formation of an organometallic compound. The reaction group II is explained in references 2 and 10. Group I is based on the notion that an interaction takes place between the metal as a nucleophile reagent and the cations of diphenyl-halogenonium and diphenyl-diazonium (their borofluoric salt). By way of conclusion, the authors furthermore try to substantiate this hypothesis, and to predict its consequences. There are 2 tables and 16 references, 10 of which are Soviet.

ASSOCIATION:

Institut elementoorganicheskikh soedineniy Akademii nauk SSSR
(Institute of Elemental-organic Compounds of the Academy of
Sciences USSR), Moskovskiy gosudarstvennyy universitet im.
M. V. Lomonosova (Moscow State University imeni M. V. Lomo...)

Card 3/4

"APPROVED FOR RELEASE: 07/16/2001

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APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001756120005-4"

TOLSTAYA, T. P.

20-4-22/52

AUTHORS: Nesmeyanov, A. N., Member of the AN USSR,
and Tolstaya, T. P.

TITLE: Triphenyloxonium Salts (Soli trifeniloksoniya).

PERIODICAL: Doklady AN SSSR, 1957, Vol. 117, Nr 4, pp. 626-628 (USSR)

ABSTRACT: The author succeeded in producing several diarylbromine salts and diarylchlorine salts by decomposition of aryl-diazonium-boron fluorides in bromobenzene or chlorobenzene. The treatise discussed here described the application of this method to the production of tertiary aromatic oxonium salts formerly unknown. Contrary to the trialkyloxonium salts examined by Meerwein triphenyloxonium salts are extremely stable compound with decomposition temperatures higher than 1500. With the exception of chloride and bromide they are hardly soluble in water. Contrary to the trialkyloxonium salts as well as to the chlorine and bromine salts triphenyloxonium salts have only little phenylating effect. So halides and boron fluoride for instance do not cause in any way the phenylation of metallic mercury, and there is no reaction of boron fluoride with copper or thallium. For the phenylation of anions as NO_2^- or N_3^- it is necessary

Card 1/2

20-4-22/52

Triphenyloxonium Salts

to boil the aqueous solutions for several hours. Under optimal circumstances the result is by 25% - 27%. It is easier to phenylate compounds containing atoms with vacant pairs of electrons. So pyridine is phenylated by nitrogen with a 90% exploit. Diethylamine can only be phenylated in presence of water with an exploit of 60%. Then follows an experimental part with the description of the production reactions and the phenylation reactions of triphenyloxonium salts. There are 1 figure, 1 table, and 5 references, 2 of which are Slavic.

ASSOCIATION: Moscow State University imeni M. V. Lomonosov
(Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova)

SUBMITTED: July 16, 1957

AVAILABLE: Library of Congress

Card 2/2

TOLSTAYA, T. P.

NESMEYANOV, A.N., akademik; TOLSTAYA, T.P.; ISAYEVA, L.S.

Phenylation reactions by means of diphenylbromonium and diphenyl-chloronium salts. Dokl. AN SSSR. 117 no.6:996-999 D '57. (MIRA 11:3)

1. Institut elementoorganicheskikh soyninenii Akademii nauk SSSR i Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.
(Bromonium compounds) (Chloronium compounds)

AUTHORS:

TOLSTAYA, T. P.
Nesmeyanov, A. N., Academician
Tolstaya, T. P., Isayeva, L. S.

20-6-21/47

TITLE:

Phenylation Reactions by Means of Diphenylbromonium and Diphenylchloronium Salts (Reaktsii fenilirovaniya posredstvom soley difenilbromoniya i difenilkhloroniya).

PERIODICAL:

Doklady AN SSSR, 1957, Vol. 117, Nr 6, pp. 996-999 (USSR).

ABSTRACT:

The authors succeeded in producing (reference 1) a number of diaryl-halogenonium-salts, among them diphenylbromonium and diphenylchloronium salts. In the present paper they describe a manipulation by which the yields of these salts may be increased by the tenfold. The behavior of the salts mentioned in the title is completely analogous to that of diphenyliodonium salts. They all represent excellent phenylating reagents which can phenylate as well homolytically (haloid salts) as heterolytically. Homolytic phenylation for example takes place during the action of iodides, bromides and chlorides of all three halogenonium-compounds upon metallic mercury, best in the case of isopropyl alcohol: $(C_6H_5)_2ClCl + Hg \rightarrow C_6H_5HgCl + C_6H_5Cl$. The surprising preliminary conclusion from the existence of this reaction is the presence of a covalent form of the halides of diphenylbromonium.

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Phenylation Reactions by Means of Diphenylbromonium and Diphenyl-
chloronium Salts. 20-6-21/47

mium and diphenylchloronium $(C_6H_5)_2Hal-Hal$, in which the central atom of the halide shall expand its octet to the decet. The phenylation reactions of diphenylbromonium and -chloronium mentioned in the paper (reference 1), an aqueous solution of sodium nitrite may serve as examples of heterolytic phenylation. On that occasion nitrobenzene, potassium cyanide (benzonitrile), sodium hydrazoate and diethylamine (diethylaniline). form. In these and other cases given here the behavior of all three diphenylhalogenonium compounds was identical. With metallic mercury these salts form haloid phenyl-mercury, which is not the case with the borofluorides, apparently due to the heterolytic decomposition of the latter. Metallic thallium behaves in the inverse manner: the diphenyl-thallium salt only forms with borofluorides of the halogenonium compounds. The relations in this case are completely identical with the results of the reaction of the diazonium salts, therefore the explanation will also be the same. Diazonium-boro-fluoride also forms organometallic compounds with lead. In order to explain this result with diazonium salts, the first author together with Makarova (reference 3) established the assumption that metals, as nucleophilic reagents, are in a position, like the anions OH^- , CN^- and so on, to transform the diazonium-cation into a diazo-form which

Card 2/4

Phenylation Reactions by Means of Diphenylbromonium and Diphenylchloronium Salts. 20-6-21/47

homolytically decomposes. An analogous explanation for the halogenonium salts will require the formation of a transition complex with metallic thallium which contains a diphenyl-halogenonium cation in a covalent form (with decet). Mercury which is sufficiently nucleophilic to transform diazonium into a diazo form is not capable of doing the same with the cations of the diphenylhalogenonium compounds, whereas less noble elements are capable of performing both transformations. All facts described can also be explained by the heterolytic decomposition of the onium compounds with a subsequent reduction of the phenyl cation by metal to a free phenyl radical. But the above described hypothesis (reference 3) is apparently confirmed by the passivity of the triphenylxonium-ion toward the metals (reference 5). The passivity is caused by an apparent inability of oxygen to expand the octet of the decet. Results of a crystallographic study and an X-ray structural analysis of the halogenonium salts are published by T. L. Khotsyanova. An experimental part with the usual data is given. There are 1 table, and 12 references, 8 of which are Slavic.

Card 3/4

Phenylation Reactions by Means of Diphenylbromonium and
Diphenylehloronium Salts.

. 20-6-21/47

ASSOCIATION: Institute for Element Organic Compounds AS USSR. Moscow State
University imeni M.V. Lomonosov. (Institut elementoorganicheskikh soye-
dineniy Akademii nauk SSSR. Moskovskiy gosudarstvennyy universitet
M. V. Lomonosova).

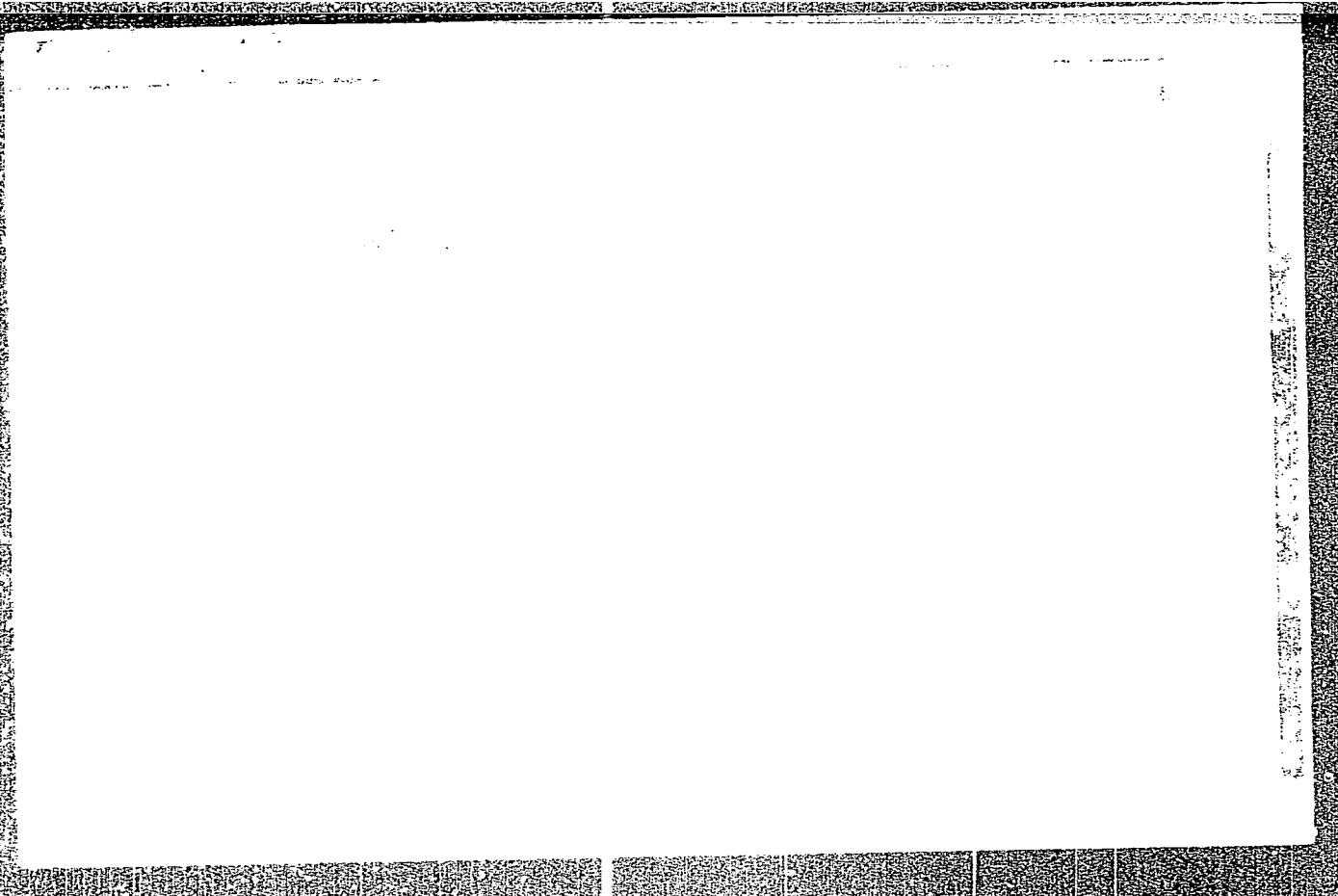
SUBMITTED: July 16, 1957.

AVAILABLE: Library of Congress.

Card 4/4

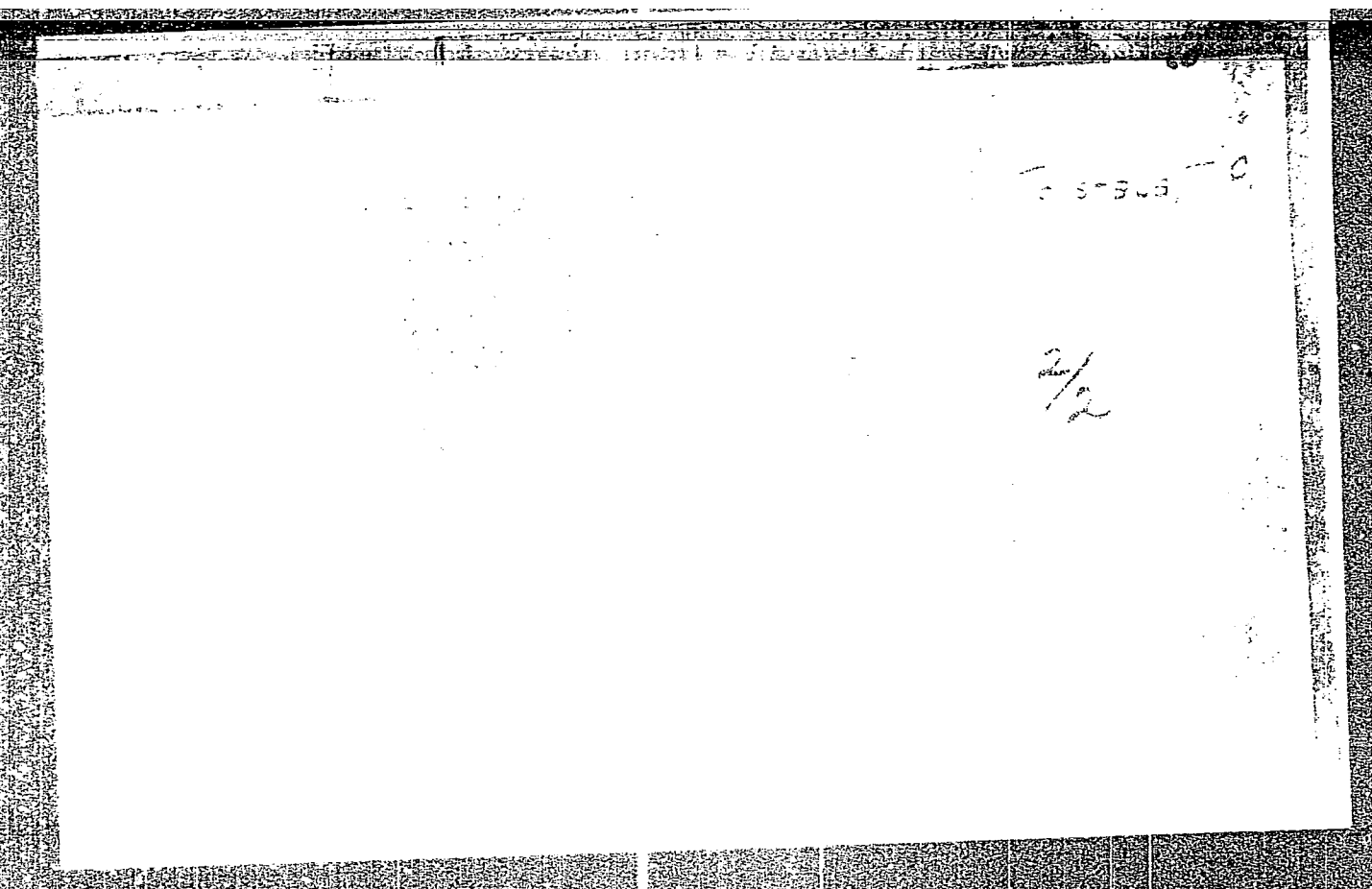
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TOLSTAYA, T.P.

NESMEYANOV, A.N.; TOLSTAYA, T.P.; ISAYEVA, L.S.

Salts of 2,2'-diphenylene halogenonium compounds. Zhur.ob.khiz. 27
no.6:1547-1551 Ja '57. (MIRA 10:8)

1.Moskovskiy gosudarstvennyy universitet.
(Halogen compounds)

TOLSTAYA, T. P.

USSR/Organic Chemistry - Synthetic Organic Chemistry, E-2

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61612

Author: Nesmeyanov, A. N., Tolstaya, T. P., Tsayeva, L. S.

Institution: None

Title: Diphenylbromonium Salts

Original

Periodical: Dokl. AN SSSR, 1955, 104, No 6, 872-875

Abstract: Heterolytic decomposition of $C_6H_5N_2BF_4$ (I) in C_6H_5Br (II) results in the formation (with a yield of ~0.5%) of diphenylbromonium borofluoride from which were obtained by double-exchange reactions, diphenylbromonium salts with the anions: J^- (decomposition temperature 81-82°); $PtCl_6^{2-}$ (decomposition temperature 159.5°); $(C_6H_5)_4B^-$ (decomposition temperature 164-165°); Br^- (decomposition temperature 82-83°); and HgJ_3 (decomposition temperature 108-109°). On decomposition of I in C_6H_5J (III) not even traces of diphenyliodonium salt are formed, which is formed on homolytic decomposition of phenyldiazoacetate (IV) in III. Decomposition of IV in II

Card 1/2

USSR/Organic Chemistry - Synthetic Organic Chemistry, E-2

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61612

Abstract: in contrast with III produces no diphenylbromonium salts. For $(C_6H_5)_2BrJ$ and $(C_6H_5)_2BrBr$ are given the absorption spectra.

Card 2/2

TOLSTAYA, T. P.

USSR/Organic Chemistry - Synthetic Organic Chemistry, E-2

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61611

Author: Nesmeyanov, A. N., Tolstaya, T. P.

Institution: None

Title: Diphenylchloronium Salts

Original

Periodical: Dokl. AN SSSR, 1955, 105. No 1, 94-95

Abstract: As a result of a heterolytic decomposition of $C_6H_5N_2BF_4$ in C_6H_5Cl there is formed the borofluoride of diphenylchloronium from which were obtained by double-exchange reactions the diphenylchloronium salts with anions: $(C_6H_5)_4B^-$ (decomposition temperature $160-161^\circ$); $PtCl_6^{2-}$ (decomposition temperature $142.5-143^\circ$); HgJ_3^- (decomposition temperature $100-100.5^\circ$). $(C_6H_5)_2ClJ$ decomposes as soon as formed. Presented are the absorption spectra of $(C_6H_5)_2Cl-B(C_6H_5)_4$ and $(C_6H_5)_4BK$.

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APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001756120005-4"

TOLSTAYA, T. P.

TOLSTAYA, T. P.: "Diaryl bromonium, diaryl chloronium, and triaryl oxonium salts".
Moscow, 1955. Moscow State U imeni M. V. Lomonosov. (Dissertations for the
degree of Candidate of Chemical Sciences.)

SO: Knizhnaya Letopis' No. 50 10 December 1955. Moscow.

Tolstaya, J. P.

Diphenylbromonium salts. A. N. Nesmeyanov, T. P. Tolstaya, and L. S. Isaeva. *Doklady Akad. Nauk S.S.S.R.* 194, 872-5 (1955).—PhBr (100 ml.) added over 1.5 hr. at 60° to 48 g. PhN₂BF₄, left 1.5 hrs. at 60° and 0.5 hr. at room temp., the mixt. washed 3 times with 30 ml. H₂O, and the aq. exts. treated with concd. NaI gave 0.46% Ph₂BrI, needles, decomp. 81-2° (from H₂O), which decomp. in 1-2 days. The salt is sol. in MeOH, EtOH, somewhat in MeNO₂, insol. in Et₂O and RH. It forms a chloroplatinate, Ph₂ClBr₂Pl₄, orange. Treatment of the aq. soln. of Ph₂BrI with Ph₂BNa gave Ph₂BrPh₂B, colorless, decomp. 164-5° (from MeNO₂-Et₂O). Treatment of Ph₂BrI with aq. HgI₂ gave Ph₂BrI.HgI₂, yellow, decomp. 108-9° (from MeNO₂-Et₂O). Aq. Ph₂BrI with NaBr gave Ph₂Br₂, decomp. 82-3° (from abs. EtOH), heated to decompn. point gave PhBr. The absorption spectrum of this salt is shown, λ 2620 Å. Heating PhBr with PhN₂OAc gave PhBr while the presence of bromonium salts in the aq. exts. was not revealed. PhI with PhN₂OAc gave a low yield of PhI₂. Decompn. of PhN₂BF₄ in PhI at 60-100° failed to yield Ph₂I ions.

G. M. Kosolapoff

Chem 3

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PMA

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APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001756120005-4"

NESMEYANOV, A.N., akademik, TOLSTAYA, T.P., ISAYEVA, L.S.

Diphenylbromonium salts. Dokl. AN SSSR 104 no.6:872-875 0 '55.
(MLBA 9:3)

(Bromonium compounds)

NESMEYANOV, A.N., akademik; TOLSTAYA, T.P.

Diphenylchloronium salts. Dokl. AN SSSR 105 no.1:94-95 N '55.
(MLBA 9:3)

(Chloronium compounds)

TOLSTAYA, T. P.

EIDENFELD, Robert, C.; LUTSENKO, I.F. [translator]; KOCHETKOV, N.K.,
[translator] TOLSTAYA, T.P. [translator]; KOHIRAT'YEVA, G.A.
[translator]; YUR'EV, Yu.K., professor, redaktor; SATAROVA, M.V.,
redaktor; GERASIMOVA, Ye.S., tekhnicheskij redaktor

[Heterocyclic compounds] Geterotsiklicheskie soedineniia. Perevod
s angliiskogo I.F.Lutsenko, i dr. Pod redaktsiei Iu.K.Iur'eva.
Moskva, Izd-vo inostrannoi lit-ry. Vol.2. 1954. 432 p. (MLRA 7:10)
(Heterocyclic compounds)

NESMEYANOV, A.N., PESCHERSKAYA, K.A., TOLSTAYA, T.P.

Chemical Structure

Effect of structural factors on conjugation phenomena. Part 4. Reactivity of the α CH-bond of various ketones. Uch.Zap.Mosk.un., no. 132, 1950.

OCTOBER 1952

9. Monthly List of Russian Accessions, Library of Congress, _____, ~~1953~~, Uncl.

TOLSTAYA, T.P.
NESMEYANOV, A.N.; KRUGLOVA, N.V.; MATERIKOVA, R.B.; TOLSTAYA, T.P.

Diaryl bromonium and diaryl chloronium salts. Zhur. ob. khim. 26 no.8:
2211-2218 Ag '56. (MLRA 10:11)

1. Institut elementoorganicheskikh soedineniy AN SSSR i Moskovskiy
gosudarstvennyy universitet.
(Halogen compounds)

DOV : 1 1981-1982

14.

NESMEYANOV, A. N., PECHERSKAYA, K. A., TOLSTAYA, T. P.

Chemical structure

Effect of structural factors on conjugation phenomena. Part 4. Reactivity of the α CH-bond of various ketones. Uch. zap. Mosk, un., No. 132, 1950.

9. Monthly List of Russian Accessions, Library of Congress, October 1952. Unclassified.
2

MOISEYKOV, S.F.; TOLSTENEV, V.S.; DRAGUNSKAYA, V.S.

Investigating the Kamyahldzha petroleum; well No.1. Izv.
AN Turk. SSR. Ser. fiz.-tekhn., khim. i geol. nauk no.6:112-
115 '61. (MIRA 15:3)

1. Turkmenskiy filial Vsesoyuznogo neftegazovogo nauchno-
issledovatel'skogo instituta.
(Turkmenistan--Petroleum--Analysis)

MOISEYKOV, S.F.: TOLSTENEV, V.S.; DRAGUNSKAYA, V.S.

Investigating petroleums and condensates of the Okarem deposit. Izv.
AN Turk. SSR. Ser. fiz.-tekh., khim. i geol.nauk no.5:122-126 '61.
(MIRA 14:11)

1. Turkmenskiy filial Vsesoyuznogo neftegazovogo nauchno-issledovatel'skogo instituta.

(Turkmenistan--Petroleum--Analysis)

L 15693-63
BW/WW/DJ

EPF(c)/EWT(m)/BDS/T-2 AEDC/AFFTC/APGC Fr-4

S/0081/63/000/008/0597/0597

ACCESSION NR: AR3003599

SOURCE: RZh. Khimiya, Abs. 8P156

AUTHOR: Oleksin, N. Ye., Starobinets, I. S., Tolstenev, V. S.

TITLE: Commercial paraffins and lubricants from the petroleums of Western Turkmenia

CITED SOURCE: Tr. Turkm. fil. Vses. neft. n.-i. in-ta, vy*p. 3, 1961, 97-108

TOPIC TAGS: paraffin production, lubricant production, petroleum fractionation

TRANSLATION OF ABSTRACT: Basic results are given of the work carried out in the Turkmen Branch, VNIINP for the investigation under laboratory conditions of the processes of obtaining commercial paraffins and lubricants from the petroleums of western Turkmenia. The initial raw materials which were used were the fractions 300-400° and 400-500° obtained upon vacuum distillation of the black oils of paraffin petroleums of Kum-Dag and Western Cheleken; use was also made of the refinery black oil from a petroleum mixture from Western Turkmenia. A technological plan was proposed for obtaining lubricants and paraffins which

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ACCESSION NR: AR3003599

satisfy the requirements of technical standards for petroleum products. This attests in principle to the possibility of the production of the indicated products under plant conditions, for which a change is necessary in the scheme of the preparation of the petroleum of Western Turkmenia from a fuel variant to a fuel-oil variant; in the given case the production is contemplated of motor fuel, of low-freezing lubricants, and also of high-melting and low-melting paraffins. I. B.

DATE ACQ: 12Jun63

SUB CODE: CH, FL

ENCL: 00

Card 2/2

MOISEYKOV, S.F.; DRAGUNSKAYA, V.S.; TOLSTENEV, V.S.

Studying the Kotur-Tepe oil field. Izv.AN Turk.SSR.Ser.fiz.-tekhn.,
khim.i geol.nauk. no.3:47-57 '62. (MIRA 16:5)

1. Turkmenskiy filial Vsesoyuznogo neftegazovogo nauchno-issledovatel'skogo instituta.

(Turkmenistan--Petroleum--Analysis)

MOISEYKOV, S.F.; TOLSTENEV, V.S.; PROSFURIN, L.P.

Investigating Algal of (Cheleken Peninsula). Tudy Turk. fil.
VNII Part C no.6:113-123 '63 (MIRA 17:7)

MOISEYEV, S.F.; KAM'YANOV, V.F.; TOLSTENEV, V.S.

Five- and six-member naphthene hydrocarbons in the gasoline fractions of petroleum. Neftoper. i neftekhim. no.10:23-25 '64.

(MIRA 17:12)

1. Turkmenskiy filial Vsesoyuznogo neftegazovogo nauchno-issledovatel'skogo instituta.

MOISEYKOV, S.F.; SAM'YANOV, V.F.; SOLODKOV, V.K.; TOLSTENEV, V.S.

Refining and dewaxing deasphaltates from the residue of petroleum
of western Turkmenia. Naftepar. i neftekhim. no.7:17-23 '65.
(MIRA 18:12)

1. Turkmenskiy filial Vsesoyuznogo neftegazovogo nauchno-
issledovatel'skogo instituta.

NOISEYKOV, S.F.; KAMIYANOV, V.F.; SOLODKOV, V.K.; TOLSTENEV, V.S.

Deasphalting the residues of petroleum from western Turkmenia.

Netleper. i neftekhim. no.6:20-23 '65.

(MIRA 18:7)

1. Turkmenkiy filial Vsesoyuznogo neftegazovogo nauchno-issledovatel'skogo instituta.

L 00045-66 ENT(m)/T VE

ACC NR: AP6020906

(A)

SOURCE CODE: UR/0202/66/000/001/0041/0048

AUTHOR: Tolstenev, V. S.; Moiseykov, S. F.

ORG: Turkmen Branch, VNII (Turkmenskiy filial VNII)

TITLE: Chemical composition and technological properties of the white fraction of gathered petroleum from East Kotur-Tepe

SOURCE: AN TurkmSSR. Izvestiya. Seriya fiziko-tekhnicheskikh, khimicheskikh i geologicheskikh nauk, no. 1, 1966, 41-48

TOPIC TAGS: petroleum, hydrocarbon, petroleum product

ABSTRACT: Gathered petroleum from East Kotur-Tepe was analyzed and shown to belong to the methane-naphthene type of low-sulfur (0.17% sulfur), low-tar, high-paraffin petroleum. The ratio of the content of methane hydrocarbons (54.6%) to that of naphthenic ones (32.2%) is 1.69. Aromatic hydrocarbons constitute 13.2%. In the benzene part, hexamethylenes are in a great majority (94%), while branched forms predominate (58%) among the paraffinic hydrocarbons. The petroleum from East Kotur-Tepe constitutes a valuable raw material for the production of normal paraffins. The white fraction of this petroleum is recommended for use in the production of summer-grade diesel fuels, gasoline components, and stock for catalytic reforming. Orig. art. has: 3 figures and 5 tables.

SUB CODE: 11/ SUEM DATE: 26Oct65/ ORIG REF: 014

Card 1/1774P

UDC: 665.54

ACC NR: AP7006039

SOURCE CODE: UR/0063/66/011/004/0387/0391

TAUBMAN, A. B., Doctor of Chemical Sciences, NIKITINA, S. A., Candidate of Chemical Sciences, and TOLSTAYA, S. N., Candidate of Chemical Sciences

ORG: none

"Surface-active Agents in the Physical Chemistry and Technology of Polymers"

Moscow, Zhurnal Vsesoyuznogo Khimicheskogo Obshchestva, Vol 11, No 4, 1966, pp 387-391

Abstract: With the exception of carbon black -- a highly hydrophobic and highly dispersed and therefore effective polymer filler, most other mineral fillers, including pigments, are hydrophilic and of low activity. The oriented adsorption of surface-active agents (SAA) on particle surfaces, lyophilizing it with respect to the polymeric medium (the polymer or its solution in an organic solvent), peptizes the filler, intensifies the molecular interaction on the particle-medium interface, and alters the strength properties arising in the filling of coagulation structures. This kind of modification with the purpose of facilitating the distribution of filler particles in the polymer (rubbers), improving the wear of pigments, and increasing the stability of paints is carried out with the aid of long-chain amines, fatty acids, their salts, and many other SAA. The high emulsifying capacity of long-chain SAA homologs -- the soaps of natural fatty acids and synthetic soaplike compounds -- affords their extensive utilization in the polymerization of latexes. For this purpose, anion-active and non-ionogenic soaps are chiefly used. Orig. art. has: 1 figure. [JPRS: 38,970]

Card 1/2

UDC: 661.185.1 + 541.6

09270828

ACC NR: AP7006039

TOPIC TAGS: surface active agent, pigment

SUB CODE: 11 / SUBM DATE: none / ORIG REF: 051 / OTH REF: 020

Card 2/2

NESMEYANOV, A.N.: FECHERSKAYA, K. A.: TOLSTAYA, T.P.

Chemical Structure

Effect of structural factors on conjugation phenomena. Part 4. Reactivity of the CH-bond of various ketones. Uch. zap. Mosk. un., No. 1, 1950.

9. Monthly List of Russian Accessions, Library of Congress, October 195²~~3~~, Uncl.

ACC NR: AR7004301

SOURCE CODE: UR/0271/66/000/011/A007/A008

AUTHOR: Tolstaykov, V. S.; Nomokonov, V. N.

TITLE: Higher reliability of pulse counters and scalars

SOURCE: Ref. zh. Avtomat. telemekh. i vychisl. tekhn., Abs. 11A59

REF SOURCE: Izv. Leningr. elektrotekhn. in-ta, ch. 2, vyp. 56, 1966, 84-88

TOPIC TAGS: pulse counter, scaler, error correcting code.

ABSTRACT: The problem of improving reliability of counters and scalars in electronic devices is considered. The probability of false signals is reduced by various means depending on the operating conditions: selected element redundancy, threshold adaption in multichannel systems, functional checks, error-detecting and error-correcting codes. One figure. N. S. [Translation of abstract]

SUB CODE: 09, 12

Card 1/1

FREYDLIN, G.N.; DAVYDOV, V.N.; Prinimali uchastiye: SHUKALOVA, R.M.;
TOLSTENKO, T.L.

Separation of phthalic acid by esterification without
catalysts. Zhur.prikl.khim. 35 no.5:1150-1153 My '62.

(Phthalic acid)

(Esterification)

(MIRA 15:5)

TOLSTHYKH, O. E.

Agricultural Education

School of progressive experience. Sots.zhiv. 14, No. 3, 1952.

9. Monthly List of Russian Accessions, Library of Congress, June 1952 Uncl.

TOLSTIK, S. I.

How to double the capacity of a defectoscope. Put' i put. khoz.
6 no.8:35 '62. (MIRA 15:10)

1. Predsedatel' postoyanno deystvuyushchego proizvodstvennogo
soveshchaniya Barabinskoy distantssi Zapadno-Sibirskoy dorogi.

(Railroads—Rails—Defects)

(Railroads—Equipment and supplies)

TOLSTIKHIN, I.

Mechanized lumber yard. Mast. ugl. 5 no.7:19-20 J1 '56.
(Kuznetsk Basin--Mine timbering) (MIRA 9:9)

TOLSTIKHIN, I.

Improved conveyers. Mast.uglia 5 no.1:17-18 Ja '56. (MLBA 9:5)
(Conveying machinery)

TOLSTIKHIN, I.

~~"Donbass"~~ cutter-loader with an increased bar. Mast.ugl.
4 no.5:13-14 My '55. (MLRA 8:7)

1. Direktor doma tekhniki tresta Leninugol' kombinata
Kuzbassugol'

(Mining machinery)